

**REMARKS/ARGUMENTS**

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-14 are presently pending in this application, Claims 1-12 having been amended and Claims 13 and 14 having been newly added by the present amendment.

In the outstanding Office Action, Claim 2 was objected to for being improper; Claims 1-3 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ichikawa et al. (U.S. Patent 6,984,253) in view of Pitcher, Jr. (U.S. Patent 4,329,162); Claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichikawa et al. in view of Pitcher, Jr. and further in view of Shimoda et al. (U.S. Patent 5,725,618); Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichikawa et al. in view of Pitcher, Jr. and further in view of Merry (U.S. Patent 5,171,341); Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichikawa et al. in view of Pitcher, Jr. and further in view of Shimoda et al.; Claim 8 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichikawa et al. in view of Pitcher, Jr. and further in view of Shimoda et al.; Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichikawa et al. in view of Pitcher, Jr. and further in view of Shimoda et al.; Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichikawa et al. in view of Pitcher, Jr. and further in view of Merry; Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichikawa et al. in view of Pitcher, Jr. and further in view of Merry; and Claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ichikawa et al. in view of Pitcher, Jr. and further in view of Merry.

In response to the objection to Claim 2, Claim 1 recites that “the bending strength  $F\alpha$  (MPa) and the length L (mm) are adjusted to satisfy the relationship of  $F\alpha \times L \geq 30$ ” whereas Claim 2 recites that “the bending strength  $F\alpha$  (MPa) and the length L (mm) satisfy the

relationship of  $F\alpha \times L \leq 200$ ." That is, in Claim 1,  $F\alpha \times L$  is 30 or larger, and in Claim 2,  $F\alpha \times L$  is 200 or smaller, providing upper end to what is recited in Claim 1. Thus, it is respectfully submitted that the subject matter recited in Claim 2 is properly presented.

Claims 1-12 have been amended to clarify the subject matter recited therein and Claims 13 and 14 have been newly added herein. These amendments and additions are believed to find support in the specification, claims and drawings as originally filed and no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Briefly recapitulating, Claim 1 is directed to a honeycomb filter for purifying exhaust gases and recites "a columnar body comprising porous ceramic and having a plurality of through holes extending in parallel with one another in a length direction of the columnar body, the columnar body having a wall portion interposed between the through holes and configured to filter particulates in exhaust gases; and a plurality of plugs filling ones of the through holes at one end of the columnar body and filling ones of the through holes at the other end of the columnar body, wherein the columnar body has a bending strength  $F\alpha$  (MPa), the plurality of plugs has a length  $L$  (mm) in the length direction, and the columnar body and the plurality of plugs are formed such that the bending strength  $F\alpha$  (MPa) and the length  $L$  (mm) are adjusted to satisfy the relationship of  $F\alpha \times L \geq 30$ ."

By providing the columnar body and plugs as such (*i.e.*, a columnar body with a lower bending strength can be prevented from cracking by making plugs longer, and a columnar body with a higher bending strength can be prevented from cracking simply by using shorter plugs), the wall portion of the columnar body is significantly prevented from cracking caused by, for example, the impact of exhaust gas pressure.

The Office Action states that the subject matters recited in Claims 1 and 2 are unpatentable because “[i]t would have been obvious ... to modify the Ichikawa et al. reference to include the plug length of 9.5-13 mm ....” However, it is respectfully submitted that neither Ichikawa et al. nor Pitcher, Jr teaches or suggests “a columnar body ...; and a plurality of plugs ..., wherein ... *the columnar body and the plurality of plugs are formed such that the bending strength  $F\alpha$  (MPa) and the length L (mm) are adjusted to satisfy the relationship of  $F\alpha \times L \geq 30$* ” as recited in amended Claim 1 and “the bending strength  $F\alpha$  (MPa) and the length L (mm) satisfy[ing] the relationship of  $F\alpha \times L \leq 200$ ” as recited in Claim 2 (emphasis added in italic). More specifically, Ichikawa et al. merely shows that honeycomb filters are constructed using filter segments A or B, where the segment A has the bending strength of 35 MPa and the segment B has the bending strength of 12 MPa, whereas Pitcher, Jr simply states that “the cement plugs were generally made with a depth or length into the cell from an end face thereof in the range of about 9.5-13 mm.” Thus, neither Ichikawa et al. nor Pitcher, Jr teaches or suggests the relationship between the bending strength of the honeycomb filter and the length of the plugs. Furthermore, according to Ichikawa et al., Table 4 appears to show that all of Examples 1-5 using either the segments A or B are equally acceptable as its invention and does not appear to provide any indication that the honeycomb filters constructed with the segment B is preferred over the ones constructed with the segment A. The bending strength of 35 MPa of the segment A would give the range of 332.5-455 based on the range of about 9.5-13 mm described in Pitcher, Jr, assuming *arguendo* that the bending strength of the segment A substantially equals the bending strength of the honeycomb filter. As such, it is believed that the subject matter recited in Claim 2 ( $30 \leq F\alpha \times L \leq 200$ ) cannot be rendered obvious. Hence, the subject matters recited in Claims 1 and 2 are believed to be distinguishable from Ichikawa et al. and Pitcher, Jr.

Shimoda et al. and Merry are cited for “collected and accumulated fine particles being removed by a back washing process using a gas flow” and “collected and accumulated fine particles being removed by heating exhaust gases and allowing the heated gases to flow therein,” respectively, and they are not believed to teach or suggest “a columnar body ...; and a plurality of plugs ..., wherein ... *the columnar body and the plurality of plugs are formed such that the bending strength  $F\alpha$  (MPa) and the length L (mm) are adjusted to satisfy the relationship of  $F\alpha \times L \geq 30$* ” as recited in amended Claim 1 and “the bending strength  $F\alpha$  (MPa) and the length L (mm) satisfy[ing] the relationship of  $F\alpha \times L \leq 200$ ” as recited in Claim 2 (emphasis added in italic). Thus, the subject matters recited in Claims 1 and 2 are believed to be distinguishable from Shimoda et al. and Merry.

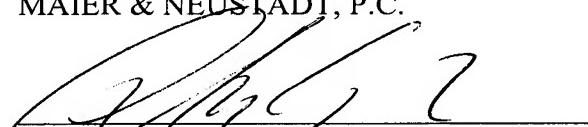
Because none of Ichikawa et al., Pitcher, Jr., Shimoda et al. and Merry discloses the bending strength  $F\alpha$  (MPa) and the length L (mm) adjusted to satisfy the cited relationships as recited in amended Claims 1 and 2, their teachings even combined are not believed to render the honeycomb filters recited in Claims 1 and 2 obvious.

For the foregoing reasons, Claims 1 and 2 are believed to be allowable. Furthermore, since Claims 3-14 depend directly or indirectly from Claim 1, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 3-14 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicant respectfully submits that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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